

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-15 (canceled).

16. (currently amended) A system for tracking software components in a distributed software component environment, comprising:

a watch component that watches for when a software component enters a first state and provides a notification that the software component is in the first state; and

a monitor component that, when the software component is in the first state, monitors for when a software component enters a second [second] state and provides a notification that the software component is in the second state.

17. (new) A system according to claim 16, wherein said first state and said second state are mutually exclusive states.

18. (new) A method for tracking the state of an object on behalf of a client by a tracking system, wherein the tracking system receives a notification when the state of the object changes, comprising:

receiving a notification when the state of the object has changed; and

upon receiving the notification, retrieving by the tracking system a behavioral reference to the object.

19. (new) A method according to claim 18, further including:

if the tracking system has previously retrieved a behavioral reference to the object, determining by the tracking system whether the previously retrieved behavioral reference and the newly retrieved behavioral reference refer to the same occurrence of the object.

20. (new) A method according to claim 19, further including:

if the previously retrieved behavioral reference and the newly retrieved behavioral reference do not refer to the same occurrence, notifying by the tracking system the client that the object has gone down and notifying the client that the object has come up.

21. (new) A method according to claim 19, wherein said determining includes determining whether the behavioral references refer to the same occurrence based on the time at which the occurrences were created.
22. (new) A method according to claim 18, wherein a behavioral reference includes a pointer.
23. (new) A computer readable medium comprising computer executable instructions for performing the method of claim 18.
24. (new) A modulated data signal carrying computer executable instructions for performing the method of claim 18.
25. (new) A computing device comprising means for performing the method of claim 18.
26. (new) In a distributed computing environment, a method for tracking the state of an object on behalf of a client by a tracking system having at least four possible states including waiting for a client to register an interest in the object, initializing a reference to the object, watching for the object to enter the up state and monitoring the object to enter the down state, comprising:
determining the current state of an object utilizing a reference to the object created during the initializing state in response to a client request to register an interest in the object; and
if the object is in the up state, notifying the client that the object is up and entering the monitoring object state, and if the object is not in the up state, notifying the client that the object is down and entering the watching object state.
27. (new) A method according to claim 26, further including:
in the watching object state, waiting by the object tracking system until notification is received from an object manager that the object has entered the up state;
when said notification is received, notifying the client by the object tracking system and providing a pointer to the object; and
entering the monitoring object state.

28. (new) A method according to claim 26, further including:
in the watching object state, receiving by the object tracking system a request to register a client; and
in response to said receiving, allocating at least one data structure for tracking the object for that client, notifying the client that the object is down and remaining in the watching object state.
29. (new) A method according to claim 26, further including:
in the watching object state, receiving by the object tracking system a request to unregister a client; and
in response to said receiving, deallocating at least one data structure for tracking the object for that client and one of (1) remaining in the watching object state if at least one client is registered with the tracking system and (2) entering the waiting for client to register an interest state if no clients are left as registered with the tracking system.
30. (new) A method according to claim 26, further including:
in the monitoring object state, waiting by the object tracking system until it receives notification from an object manager that the object has entered the down state, and when so notified, notifying at least one other client; and
entering the watching object state.
31. (new) A method according to claim 26, further including:
in the monitoring object state, receiving by the object tracking system a request to register a client; and
in response to said receiving, allocating at least one data structure for tracking the object for the client, notifying the client that the object is up and staying in the monitoring object state.
32. (new) A method according to claim 26, further including
in the monitoring object state, receiving by the object tracking system a request to unregister a client; and
in response to said receiving, deallocating at least one data structure for tracking the object for that client and one of (1) remaining in the monitoring object state if at least one client

is registered with the tracking system and (2) entering the waiting for client to register an interest state if no clients are left as registered with the tracking system.

33. (new) A method according to claim 26, wherein said object is one of a hardware and software object.
34. (new) A computer readable medium comprising computer executable instructions for performing the method of claim 26.
35. (new) A modulated data signal carrying computer executable instructions for performing the method of claim 26.
36. (new) A computing device comprising means for performing the method of claim 26.